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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,103	02/12/2002	Robert J. Sinaiko	SHPR-01041USS SRM	8118

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EXAMINER

TRAN, THAO T

ART UNIT	PAPER NUMBER
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1711

-10

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/074,103

Applicant(s)

SINAIKO ET AL.

Examiner

Thao T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because on page 9 of the specification, it is indicated that the second electrode 242 is teardrop or V-shaped in Figures 5I-5J. However, these Figures only illustrate the second electrodes as teardrop, not V-shaped.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 22, 24, 26, and 28 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims contain "said second electrode is V-shaped with a small rounded end" which does not have proper support in the specification or the drawings.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1-8, 11-18, 21-22, 24-26, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicant regards as the invention.

Claims 1-8 and 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. The claims recite two electrodes and a voltage generator, wherein the second electrode has two or more surfaces that are at an angle to each other. There would be innumerable of references teaching these limitations. Applicants are reminded that any object, such as an electrode, would be 3-dimensional and hence would have at least two surfaces that are at an angle to each other. With respect to the inlet and outlet of the housing, there are numerous devices that would have a housing with at least one inlet and one outlet. Therefore, the claims are omnibus and hence indefinite. Specific definition of the type of angle(s) of the surfaces of the second electrode is required.

Claims 22, 24, 26, 28 are indefinite due to the use of "said second electrode is V-shaped with a rounded end". It is unclear to the examiner as to how a V-shaped electrode would have a rounded end. If the end is rounded, wouldn't the electrode be U-shaped?

6. Claims 21 and 25 recite the limitation "the pointed end" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12, 21-27 of U.S. Patent No. 6,152,146. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent contain the subject matter that is narrower in scope than the instant claims, rendering them obvious over each other.

The claims of the patent recite a housing (body) having at least one vent and an ion generator, the ion generator comprising a high voltage generator and an electrode assembly, wherein the second electrodes are hollow and have a first surface and a second surface with a skirt-like region extending in the downstream direction; the second electrodes are U-shaped with a bulbous nose region and trailing edge regions, or L-shaped with a curved nose region. The claims of the patent further teach additional limitations, such as the duty cycle and the potential of the voltage generator, making them narrower in scope than the instant claims.

9. Claims 1-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,176,977. Although the

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conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent contain the subject matter that is narrower in scope than the instant claims, rendering them obvious over each other.

The claims of the patent teach a housing having at least one vent and an ion generator, the ion generator comprising a high voltage generator and an electrode assembly, wherein the second electrodes are hollow. The second electrodes are U-shaped with a bulbous nose region and trailing edge regions, or L-shaped with a curved nose region. The claims of the patent further teach additional limitations, such as the duty cycle and the potential of the voltage generator, making them narrower in scope than the instant claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 3-11, 13-20, 22, 24, 26, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor et al. (US Pat. 5,975,090).

The applied reference has a common Assignee and a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Taylor teaches a housing (body) having an air inlet 130 and an air outlet 150, an ion generator 160, disposed inside the housing and having first and second electrodes; a voltage generator coupled to the electrodes; wherein each of the second electrodes comprises two or more surfaces that are at an angle to each other (see Figs. 1-2, 4-5; col. 3, ln. 27-35; col. 7, ln. 1-8).

Taylor further teaches the second electrodes to be hollow, or have a downstream tail section that is substantially wider than an upstream nose region, or an upstream leading planar section and a downstream trailing section that is at an angle to the leading planar section, or that the surfaces are planar (see Figs. 1a-b, 4a-4k). Taylor further teaches the second electrodes to be V-shaped with the rounded end located closer to the first electrodes (see Fig. 4f).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 3-11, and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee (US Pat. 4,789,801).

Lee teaches a system, comprising a housing 20, first and second electrodes 50 and 52; a high voltage generator 12; wherein the second electrodes comprises two or more surfaces that are at an angle to each other (see Figs. 1-3).

Lee further teaches the second electrodes having a downstream tail section that is substantially wider than an upstream nose section; an upstream planar section and a downstream trailing section that is at an angle to the leading planar section; two or more surfaces are each planar; being hollow (see Figs. 1-6).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2, 12, 21, 23, 25, and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor as applied to claims 1, 9, 11, and 19 above.

Taylor is as set forth in claims 1, 9, 11, and 19 above, and incorporated herein.

Taylor teaches the second electrodes being teardrop-shaped with a small rounded end and a large bulbous end (see Fig. 1a).

Taylor differs from the presently claimed invention because the reference teaches the small rounded end is located away instead of near the first electrodes. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that whether the second electrodes are positioned such that the small rounded end would be away or near the first electrodes would be an obvious matter of design choice; because the air conditioning system would work equally well in either position of the second electrodes. Moreover, Applicants have not disclosed whether this particular position of the second electrodes would be more advantageous than the other position. See *MPEP 2144.04, VIC*.

With respect to the shapes of the second electrodes, Taylor does not teach the second electrodes to be Z-shaped. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that a particular configuration of the electrodes would have been an obvious matter of design choice, since the ion generating system would work

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equally well whether the electrodes are Z-shaped or not; and hence would have insignificant patentable weight, absence of persuasive evidence. See *MPEP 2144.04, IIIB*. Moreover, Applicants have not disclosed whether this particular shape of the second electrodes would be more advantageous than the other shape.

15. Claims 2, 12, 21, 23, 25, and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Lee as applied to claims 1, 9, 11, and 19 above.

Lee is as set forth in claims 1, 9, 11, and 19 above, and incorporated herein.

Taylor teaches the second electrodes being teardrop-shaped with a small rounded end and a large bulbous end (see Fig. 2).

Lee differs from the presently claimed invention because the reference teaches the small rounded end is located away instead of near the first electrodes. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that whether the second electrodes are positioned such that the small rounded end would be away or near the first electrodes would be an obvious matter of design choice; because the air conditioning system would work equally well in either position of the second electrodes. Moreover, Applicants have not disclosed whether this particular position of the second electrodes would be more advantageous than the other position. See *MPEP 2144.04, VIC*.

With respect to the shapes of the second electrodes, Taylor does not teach the second electrodes to be Z-shaped. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that a particular configuration of the electrodes would have been a obvious matter of design choice, since the ion generating system would work equally well whether the electrodes are Z-shaped or not; and hence would have insignificant

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patentable weight, absence of persuasive evidence. See *MPEP 2144.04, IIIB*. Moreover, Applicants have not disclosed whether this particular shape of the second electrodes would be more advantageous than the other shape.

Contact Information

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 703-306-5698. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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April 19, 2003

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700